

# Clean Energy Task Force Meeting

Nov 5, 2014

Catherine Diviney, Energy Specialist

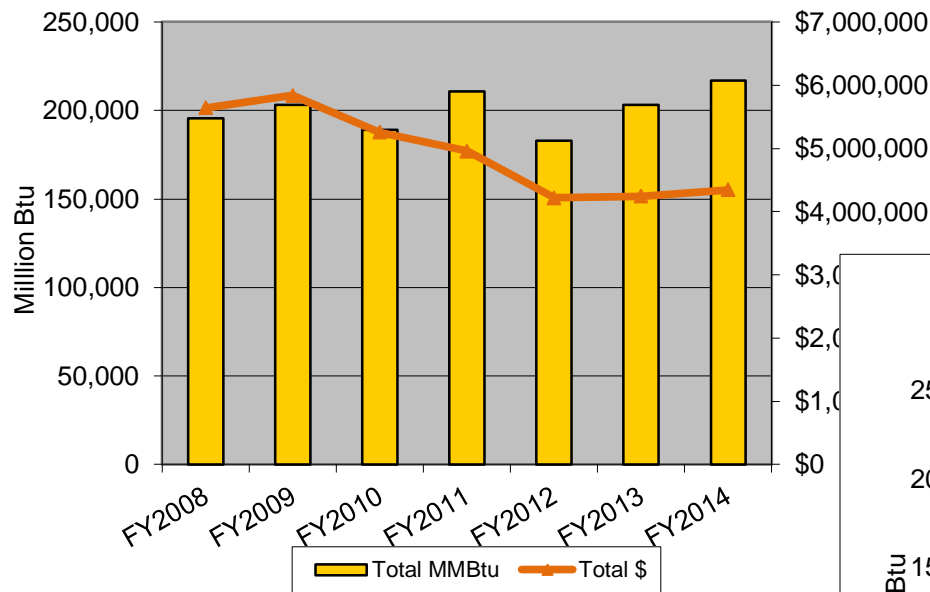
[www.westhartford.org/green](http://www.westhartford.org/green)

# Town of West Hartford

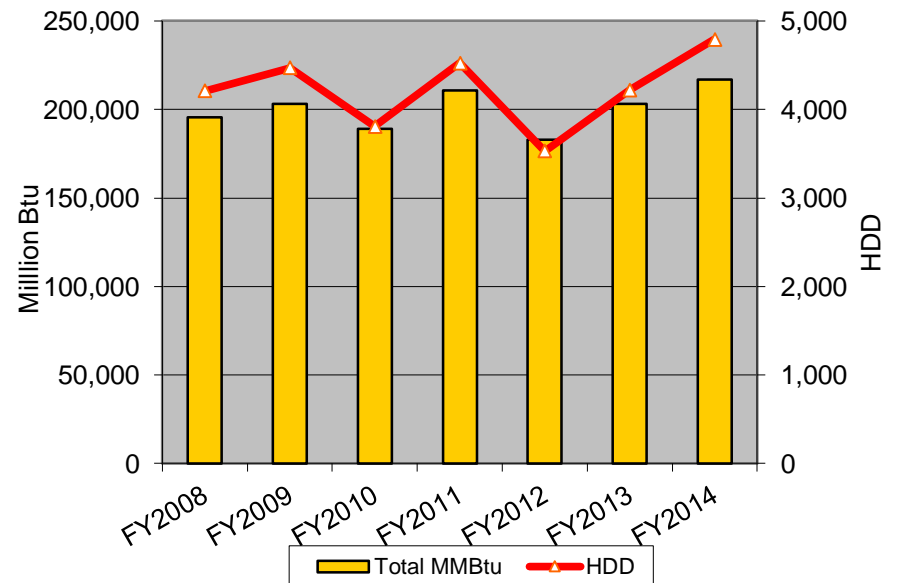
<b>FY2014</b>	<b>WHPS</b>	<b>%</b>	<b>Town</b>	<b>%</b>	<b>Total</b>
Electricity (kWh)	11,075,685	51%	10,432,019	49%	21,507,704
Electricity Cost (\$)	\$1,755,980	55%	\$1,452,494	45%	\$3,208,474
Natural Gas (ccf)	978,828	75%	321,328	25%	1,300,156
Natural Gas Cost (\$)	\$693,450	73%	\$255,563	27%	\$949,012
Total Energy (MMBtu)	138,425	67%	68,637	33%	207,062
Total Energy Cost (\$)	\$2,449,429	59%	\$1,708,057	41%	\$4,157,486

# Town of West Hartford

## Energy Use & Cost



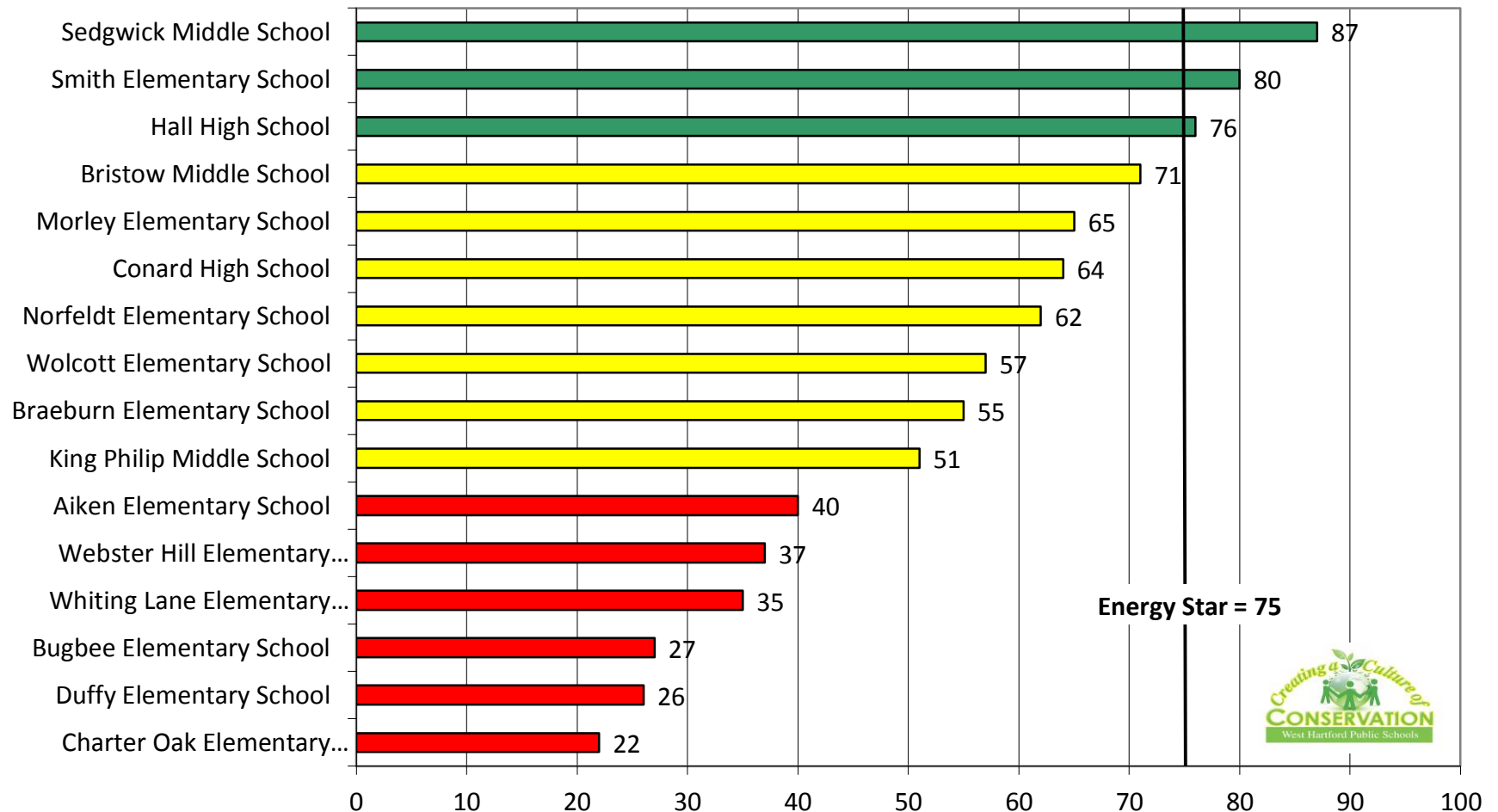
## Energy Use & Heating Degree Days



# Town of West Hartford

## West Hartford Public Schools: Energy Star Rating

September 30, 2013



# CEC Goals – revised 2012

Efficiency Track			Clean Energy Track		
Reduce municipal building energy consumption by 20% by 2018			Support voluntarily 20% of municipal building electricity from clean, renewable sources by 2018		
FY13-14	8%	-2%	FY13-14	16%	18%
FY14-15	11%		FY14-15	17%	
FY15-16	14%		FY15-16	18%	
FY16-17	17%		FY16-17	19%	
FY17-18	20%		FY17-18	20%	

\*Baseline FY08-09

But...

# But...

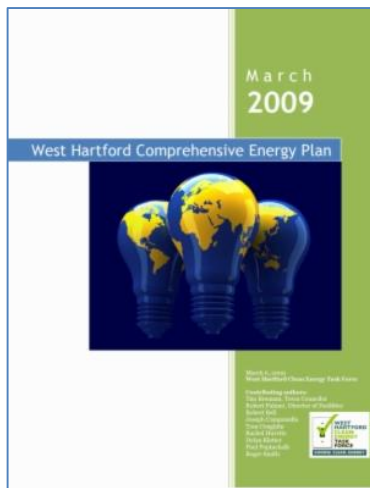
- What metric is CEC using?
- Only includes buildings in PM (34 properties)
  - About 93% of Town's total use
  - No street lights, parks, misc, etc.
- Have not implemented Performance Contract yet
  - 3.3M kwh & 202 Th of savings → 15%+ reduction

# More but(s)...

- Big reductions on buildings where projects implemented
  - Aiken 23%
  - Noah Web 42%
  - Sedgwick 11%)
- Cost = 29% reduction
- Extra points for C-PACE, Solarize, etc.

# Comprehensive Energy Plan

- Requested by Town Council 2008
- Approved unanimously by Town Council in 2009
- Based on original **2006 commitments**



- 20% by 2010 – CEC clean energy campaign
- US Conference of Mayors Climate Protection Agreement – reduce GHG 7% below 1990 levels – inventory?
- EPA Community Energy Challenge – reduce 10% by ?



# Plan Overview

- Town's buildings, lighting, and fleet
- Not addressed – residents or businesses
- Identify opportunities for:
  1. energy mitigation through improved efficiency and culture of conservation
  2. increased use of clean and renewable energy
- Focus on technology, individual action & education
- Help address climate change, short and long-term savings

# 5 Sections

- I. Buildings, Lighting, Clean Energy Generation
- II. Planning, Implementation, Financing
- III. Vehicles, Transportation, Outdoor Engines,
- IV. Purchasing and Procurement
- V. Conclusion

# I. Buildings, etc.

Accomplished	Not accomplished
Baseline Energy Use <b>by 11/1/09</b>	
New Construction – LEED Gold	
Expand building energy audits <b>by 10/31/09</b> ; Building-by-building up-grade plans <b>by 11/15/09</b>	Adopt a methodology of life-cycle costing
Town-wide building efficiency strategy (prioritization, timeline, funding) <b>by 12/31/09</b>	
Retain 3 <sup>rd</sup> party to conduct more rigorous building audits	
Hire Energy Manager position	
Short-term renewable strategy for solar PV or solar thermal	Longer-term renewable strategy

# I. Buildings, etc.

Accomplished	Not accomplished
Explore other clean energy – geothermal, <b>micro-hydro</b> , wind, <b>fuel cells</b>	Prioritize CHP
Explore non-roof solar	Examine green roof potential
Decline to run diesel generators at non-emergency times	
Street lights - remove/power down; replace with LED	Create an Energy Management Team to track and communicate progress of plan
Continue WHPS energy challenge	Expand energy challenge to town buildings
Phase out dorm-sized refrigerators	Create “clean energy team” in town-owned buildings
Raise awareness and volunteerism	Create energy guidelines/policies for departments
	Create energy surveys for building occupants
	Install energy dashboards/visual aids

## II. Planning, Finance, etc.

Accomplished	Not accomplished
Hire full-time Energy Manager	
Utilize outside expert consultants	Join ICLEI
Create hierarchy of funding – grants, on-bill, capital improvement plan, <b>operating energy surplus</b> , performance contract	50% of energy savings reinvested in further improvements
Advocate for improvements to funding and support for municipal energy upgrades	

# III. Vehicles, etc.

Accomplished	Not accomplished
2 EV charging stations installed; 2 planned	Establish baseline fuel consumption - Reduce fuel use 5% by 2009; 10% by 2011
Adopt Anti-idling requirement; post signs	Prepare fleet information for CT DOT RFP for CT Clean Fuel Program and Diesel Emission Reduction ACT
	Prepare heavy duty diesel vehicle inventory
	Establish protocol to replace fleet and to improve fleet fuel efficiency
	Ensure proper vehicle maintenance
	Evaluate fuel options: EV, biodiesel, etc.
	Evaluate landscaping equipment
	Evaluate sharing heavy equipment
	Promote culture of conservation with other departments/individuals

# IV. Purchasing, etc.

Accomplished	Not accomplished
Building Energy Management Systems standardized	Create guidelines for departments and standardization
Preference to electricity from clean, renewable sources	
Require that new equipment meet or exceed FEMP recommended levels (Energy star, Utility Rebates)	Purchase energy saving appliances
	Lease/purchase most fuel-efficient vehicle models
	Preference to contractors that use diesel emissions controls on their vehicles/equipment

# V. Conclusion

Accomplished	Not accomplished
	Revise plan annually – living document and quarterly updates from departments
	Develop plan for residents and businesses by 3/1/10
	Consider broader sustainability and GHG plans



# Not Specifically in Plan

## Accomplished

Renewed CEC pledge - 2012

Solarize WH; CEFIA – Sunshot; Thermal Imaging (West Hartford has Energy); C-PACE

New utility bill tracking system (incl. water)

Energy Procurement – cost savings

CT Green Leaf Schools; EPA Green Power Partner; Power of Change Awards

Project Standards, Cx, CL&P Rebates

Trainings for Energy Specialist & Custodians

Revised / Passed Town Alternative Energy Ordinance

Celebrate WH

Home Energy Workshops; School Presentations; Network/Liasion

Grants – NE Grass Roots, CWA task force assistance, CEC Bright Idea, CL&P \$20K ESPC

EV Charging Stations

Recycling

# Revise Plan

- I. Buildings: implement Perf Contract projects; solar; revise long-term planning, **work on people-aspects**
- II. Planning, Finance: review funds, combine with purchasing?
- III. Vehicles: **needs work**, challenge various departments
- IV. Purchasing: green purchasing/preference policy, challenge decentralized
- V. Conclusion: realistic, metrics/format, **add residents & businesses, GHG inventory?**

# 3-4 BIG Endeavors

- Update Existing Energy Plan: town operations
- Expand Energy Plan: community
  - Residents
  - Businesses
- Create Recycling Plan
- New Framework? Sustainability, Climate Change?